

What is claimed is:

1 1. A computer program product for improving performance and resource utilization of
2 software applications that interact with a back-end data source to retrieve information stored
3 therein, the computer program product embodied on one or more computer-readable media and
4 comprising:

5 computer-readable program code means for storing one or more objects in a cache for
6 responding to read requests against the objects, wherein (1) a set of input properties and values
7 thereof is stored with or associated with each stored object and (2) refresh logic specifying how to
8 refresh each of the stored objects is stored with or associated with the stored object or a group of
9 stored objects;

10 computer-readable program code means for specifying a refresh policy that corresponds to
11 each stored object or to each group of stored objects;

12 computer-readable program code means for receiving read requests against one or more
13 of the objects;

14 computer-readable program code means for responding to the read requests using the
15 stored objects;

16 computer-readable program code means for scheduling a refresh of a selected stored
17 object by queuing the selected stored object or a reference thereto as a queued refresh request on
18 a refresh queue; and

19 computer-readable program code means for refreshing the selected stored object, when
20 triggered according to the corresponding refresh policy, by executing the refresh logic stored with
21 or associated with the queued refresh request.

1 2. The computer program product according to Claim 1, wherein a separate refresh queue is
2 created for each of one or more back-end data sources to be accessed during operation of the
3 computer-readable program code means for refreshing.

1 3. The computer program product according to Claim 1, wherein the refresh policy
2 comprises information about an associated object which is used for responding to update requests.

1 4. The computer program product according to Claim 1, wherein the refresh policy
2 comprises reaching a particular time of day.

1 5. The computer program product according to Claim 1, wherein the refresh policy
2 comprises reaching an elapsed time since a prior refresh.

1 6. The computer program product according to Claim 1, further comprising:
2 computer-readable program code means for connecting to the back-end data source prior
3 to operation of the computer-readable program code means for refreshing; and
4 computer-readable program code means for disconnecting from the back-end data source
5 after operation of the computer-readable program code means for refreshing.

1 17. A system for improving performance and resource utilization of software applications that
2 interact with a back-end data source to retrieve information stored therein, comprising:

3 means for storing one or more objects in a cache for responding to read requests against
4 the objects, wherein (1) a set of input properties and values thereof is stored with or associated
5 with each stored object and (2) refresh logic specifying how to refresh each of the stored objects
6 is stored with or associated with the stored object or a group of stored objects;

7 means for specifying a refresh policy that corresponds to each stored object or to each
8 group of stored objects;

9 means for receiving read requests against one or more of the objects;

10 means for responding to the read requests using the stored objects;

11 means for scheduling a refresh of a selected stored object by queuing the selected stored
12 object or a reference thereto as a queued refresh request on a refresh queue; and

13 means for refreshing the selected stored object, when triggered according to the
14 corresponding refresh policy, by executing the refresh logic stored with or associated with the
15 queued refresh request.

1 18. The system according to Claim 17, wherein a separate refresh queue is created for each of
2 one or more back-end data sources to be accessed during operation of the means for refreshing.

1 19. The system according to Claim 17, wherein the refresh policy comprises information about
2 an associated object which is used for responding to update requests.

1 20. The system according to Claim 17, wherein the refresh policy comprises reaching a
2 particular time of day.

1 21. The system according to Claim 17, wherein the refresh policy comprises reaching an
2 elapsed time since a prior refresh.

1 22. The system according to Claim 17, further comprising:
2 means for connecting to the back-end data source prior to operation of the means for
3 refreshing; and
4 means for disconnecting from the back-end data source after operation of the means for
5 refreshing.

1 33. A method for improving performance and resource utilization of software applications that
2 interact with a back-end data source to retrieve information stored therein, comprising the steps
3 of:

4 storing one or more objects in a cache for responding to read requests against the objects,
5 wherein (1) a set of input properties and values thereof is stored with or associated with each
6 stored object and (2) refresh logic specifying how to refresh each of the stored objects is stored
7 with or associated with the stored object or a group of stored objects;
8 specifying a refresh policy that corresponds to each stored object or to each group of
9 stored objects;

10 receiving read requests against one or more of the objects;
11 responding to the read requests using the stored objects;
12 scheduling a refresh of a selected stored object by queuing the selected stored object or a

13 reference thereto as a queued refresh request on a refresh queue; and
14 refreshing the selected stored object, when triggered according to the corresponding
15 refresh policy, by executing the refresh logic stored with or associated with the queued refresh
16 request.

1 34. The method according to Claim 33, wherein a separate refresh queue is created for each of
2 one or more back-end data sources to be accessed during operation of the refreshing step.

1 35. The method according to Claim 33, wherein the refresh policy comprises information
2 about an associated object which is used for responding to update requests.

1 36. The method according to Claim 33, wherein the refresh policy comprises reaching a
2 particular time of day.

1 37. The method according to Claim 33, wherein the refresh policy comprises reaching an
2 elapsed time since a prior refresh.

1 38. The method according to Claim 33, further comprising the steps of:
2 connecting to the back-end data source prior to operation of the refreshing step; and
3 disconnecting from the back-end data source after operation of the refreshing step.